



PRODUCT GUIDE

October 1993

Programmable Logic Devices

Part Number	Packages	Speeds	Description	Availability
Flash-Based				
ATF16V8B,L	20-Pin	7.5-25 ns	8 FFs, 8 I/O Pins, High Speed & Low Power	4Q-93
ATF22V10B,L	24-Pin	7.5-25 ns	10 FFs, 10 I/O Pins, High Speed & Low Power	4Q-93
Low Voltage				
AT22LV10,L	24-Pin	20-35 ns	10 FFs, 10 I/O Pins, Standard & Low Power	Now
ATV750BV,L	24-Pin	15-30 ns	20 FFs, 10 I/O Pins, Standard & Low Power	4Q-93
ATV2500BV,L	40-Pin	20-35 ns	48 FFs, 24 I/O Pins, Standard & Low Power	4Q-93
Standard				
AT18V8Z	20-Pin	25-40 ns	8 FFs, 8 I/O Pins, Zero-Power Standby	Now
AT22V10,L	24-Pin	15-35 ns	10 FFs, 10 I/O Pins, Standard & Low Power	Now
AT22V10B	24-Pin	10-12 ns	10 FFs, 10 I/O Pins, High Speed	Now
ATV750,L	24-Pin	20-40 ns	20 FFs, 10 I/O Pins, Standard & Low Power	Now
ATV750B,L	24-Pin	10-25 ns	20 FFs, 10 I/O Pins, Standard & Low Power, High Speed	4Q-93
ATV2500H,L	40-Pin	25-45 ns	48 FFs, 24 I/O Pins, Standard & Low Power	Now
ATV2500B,L	40-Pin	15-30 ns	48 FFs, 24 I/O Pins, Standard & Low Power, High Speed	4Q-93
ATV5000,L	68-Pin	25-35 ns	128 FFs, 52 I/O Pins, Standard & Low Power	Now
ATV5100,L	68-Pin	25-35 ns	128 FFs, 52 I/O Pins, Standard & Low Power	Now
ATH3000,L	68-Pin	15-25 ns	56 FFs, 56 I/O Pins, High Throughput, Standard & Low Power	Now

FPGAs

Part Number	Usable Gates	Frequency	Description	Availability
AT6002	2K	250 MHz	1,024 Registers, 96 I/O Pins, Low Power	4Q-93
AT6003	3K	250 MHz	1,600 Registers, 108 I/O Pins, Low Power	1Q-94
AT6005	5K	250 MHz	3,136 Registers, 108 I/O Pins, Low Power	4Q-93
AT6010	10K	250 MHz	6,400 Registers, 173 I/O Pins, Low Power	2Q-94

Flash PEROMs

Part Number	Organization	Speeds	Description	Availability
Low Voltage				
AT29LV256	32K x 8	200-250 ns	256K, 3-Volt Programmable, Erasable ROM	Now
AT29LV512	64K x 8	200-250 ns	512K, 3-Volt Programmable, Erasable ROM	Now
AT29LV010	128K x 8	200-250 ns	1-Mbit, 3-Volt Programmable, Erasable ROM	Now
AT29LV020	256K x 8	200-250 ns	2-Mbit, 3-Volt Programmable, Erasable ROM	4Q-93
AT29LV040	512K x 8	200-250 ns	4-Mbit, 3-Volt Programmable, Erasable ROM	Now
Standard				
AT29C256	32K x 8	90-250 ns	256K, 5-Volt Programmable, Erasable ROM	Now
AT29C257	32K x 8	90-250 ns	256K, 5-Volt Programmable, Erasable ROM	Now
AT29C512	64K x 8	90-200 ns	512K, 5-Volt Programmable, Erasable ROM	Now
AT29C1024	64K x 16	70-200 ns	1-Mbit, 5-Volt Programmable, Erasable ROM	4Q-93
AT29C010	128K x 8	90-200 ns	1-Mbit, 5-Volt Programmable, Erasable ROM	Now
AT29C020	256K x 8	100-200 ns	2-Mbit, 5-Volt Programmable, Erasable ROM	4Q-93
AT29C040	512K x 8	120-250 ns	4-Mbit, 5-Volt Programmable, Erasable ROM	Now

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Serial E²PROMs

Part Number	Organization	V _{CC}	Description	Availability
AT24C01	128 x 8	1.8, 2.5, 2.7, 5.0 V	2-Wire, 1K Serial E ² PROM	Now
AT24C01A	128 x 8	1.8, 2.5, 2.7, 5.0 V	2-Wire, 1K Serial E ² PROM	Now
AT24C02	256 x 8	1.8, 2.5, 2.7, 5.0 V	2-Wire, 2K Serial E ² PROM	Now
AT24C04	512 x 8	1.8, 2.5, 2.7, 5.0 V	2-Wire, 4K Serial E ² PROM	Now
AT24C08	1024 x 8	1.8, 2.5, 2.7, 5.0 V	2-Wire, 8K Serial E ² PROM	Now
AT24C16	2048 x 8	1.8, 2.5, 2.7, 5.0 V	2-Wire, 16K Serial E ² PROM	Now
AT24C164	2048 x 8	1.8, 2.5, 2.7, 5.0 V	2-Wire, 16K Serial E ² PROM	Now
AT93C46	64 x 16 / 128 x 8	1.8, 2.5, 2.7, 5.0 V	3-Wire, 1K Serial E ² PROM	Now
AT93C56	128 x 16 / 256 x 8	2.7, 5.0 V	3-Wire, 2K Serial E ² PROM	Now
AT93C57	128 x 16 / 256 x 8	2.7, 5.0 V	3-Wire, 2K Serial E ² PROM	Now
AT93C66	256 x 16 / 512 x 8	2.7, 5.0 V	3-Wire, 4K Serial E ² PROM	Now
AT59C11	64 x 16 / 128 x 8	2.7, 5.0 V	4-Wire, 1K Serial E ² PROM	Now
AT59C22	128 x 16 / 256 x 8	2.7, 5.0 V	4-Wire, 2K Serial E ² PROM	Now
AT59C13	256 x 16 / 512 x 8	2.7, 5.0 V	4-Wire, 4K Serial E ² PROM	Now

Parallel E²PROMs

Part Number	Organization	Speeds	Description	Availability
High Speed				
AT28HC64B	8K x 8	55-120 ns	64K E ² PROM with 64-Byte Page, Software Data Protection	Now
AT28HC256,L	32K x 8	70-120 ns	256K E ² PROM with 64-Byte Page & Software Data Protection	Now
AT28HC256E,LE	32K x 8	70-120 ns	256K E ² PROM with Extended Endurance, Standard & Low Power	Now
AT28HC256F,LF	32K x 8	70-120 ns	256K E ² PROM with Fast Write, Standard & Low Power	Now
Low Voltage				
AT28LV64	8K x 8	200-300 ns	64K E ² PROM	Now
AT28LV256	32K x 8	200-300 ns	256K E ² PROM	Now
Standard				
AT28C04	512 x 8	150-250 ns	4K E ² PROM	Now
AT28C04E	512 x 8	150-250 ns	4K E ² PROM with Extended Endurance	Now
AT28C04F	512 x 8	150-250 ns	4K E ² PROM with Fast Write	Now
AT28C16	2K x 8	150-250 ns	16K E ² PROM	Now
AT28C16E	2K x 8	150-250 ns	16K E ² PROM with Extended Endurance	Now
AT28C16F	2K x 8	150-250 ns	16K E ² PROM with Fast Write	Now
AT28C17	2K x 8	150-250 ns	16K E ² PROM with Ready/Busy	Now
AT28C17E	2K x 8	150-250 ns	16K E ² PROM with Ready/Busy & Extended Endurance	Now
AT28C17F	2K x 8	150-250 ns	16K E ² PROM with Ready/Busy & Fast Write	Now
AT28C64	8K x 8	120-350 ns	64K E ² PROM	Now
AT28C64E	8K x 8	120-350 ns	64K E ² PROM with Extended Endurance	Now
AT28C64F	8K x 8	120-350 ns	64K E ² PROM with Fast Write	Now
AT28C64X	8K x 8	150-450 ns	64K E ² PROM without Ready-Busy	Now
AT28C64B	8K x 8	150-250 ns	64K E ² PROM with 64-Byte Page, Software Data Protection & Extended Endurance	Now
AT28C256	32K x 8	150-350 ns	256K E ² PROM with 64-Byte Page & Software Data Protection	Now
AT28C256E	32K x 8	150-350 ns	256K E ² PROM with Extended Endurance	Now
AT28C256F	32K x 8	150-350 ns	256K E ² PROM with Fast Write	Now
AT28C1024	64K x 16	120-250 ns	1-Mbit E ² PROM	Now
AT28C010	128K x 8	120-250 ns	1-Mbit E ² PROM with 128-Byte Page	Now
AT28C010E	128K x 8	120-250 ns	1-Mbit E ² PROM with 128-Byte Page & Extended Endurance	Now
AT28MC020	256K x 8	150-250 ns	2-Mbit E ² PROM Module	Now
AT28MC040	512K x 8	150-250 ns	4-Mbit E ² PROM Module	Now

EPROMs

Part Number	Organization	Speeds	Description	Availability
High Speed				
AT27HC010	128K x 8	35 ns	1-Mbit EPROM	1Q-94
Low Voltage				
AT27LV256R	32K x 8	150-250 ns	256K 3-Volt EPROM	Now
AT27LV512R	64K x 8	150-250 ns	512K 3-Volt EPROM	Now
AT27LV1024	64K x 16	200-300 ns	1-Mbit, 3-Volt EPROM	Now
AT27LV010	128K x 8	200-300 ns	1-Mbit, 3-Volt EPROM	Now
AT27LV020	256K x 8	250-300 ns	2-Mbit, 3-Volt EPROM	1Q-94
AT27LV4096	256K x 16	250-300 ns	4-Mbit, 3-Volt EPROM	1Q-94
AT27LV040	512K x 8	250-300 ns	4-Mbit, 3-Volt EPROM	Now
AT27LV080	1024K x 8	250-300 ns	8-Mbit, 3-Volt EPROM	1Q-94
Standard				
AT27C256R	32K x 8	55-250 ns	256K EPROM	Now
AT27C512R	64K x 8	70-250 ns	512K EPROM	Now
AT27C1024	64K x 16	70-250 ns	1-Mbit EPROM	Now
AT27C010,L	128K x 8	70-250 ns	1-Mbit EPROM, Standard & Low Power	Now
AT27C020	256K x 8	85-200 ns	2-Mbit EPROM	4Q-93
AT27C4096	256K x 16	100-200 ns	4-Mbit EPROM	1Q-94
AT27C040	512K x 8	100-200 ns	4-Mbit EPROM	Now
AT27C080	1024K x 8	100-200 ns	8-Mbit EPROM	4Q-93

PROMs

Part Number	Organization	Speeds	Description	Availability
AT27HC641R	8K x 8	35-90 ns	High Speed 64K Reprogrammable [UV]PROM	Now
AT27HC642R	8K x 8	35-90 ns	High Speed 64K Reprogrammable [UV]PROM	Now

SRAMs

Part Number	Organization	Speeds	Description	Availability
AT3864L	8K x 8	100-150 ns	64K SRAM	Now

Flash Memory Card

Part Number	Organization	V _{cc}	Description	Availability
AT5FC001	1 Mbyte	5.0 V	501 PCMCIA/Compatible Flash Memory Card	Now
AT5FC002	2 Mbyte	5.0 V	501 PCMCIA/Compatible Flash Memory Card	1Q-94
AT3FC001	1 Mbyte	3.3 V	501 PCMCIA/Compatible Flash Memory Card	1Q-94
AT3FC002	2 Mbyte	3.3 V	501 PCMCIA/Compatible Flash Memory Card	1Q-94

Gate Arrays

Part Number	Gates	Description	Availability
ATL Series	4K-80K	1.0-Micron CMOS Gate Array, 3.3-Volt & 5.0-Volt Operation, 16 Versions with Various Pin & Gate Counts	Now
ATL80 Series	14K-580K	0.8-Micron CMOS Gate Array, 3.3-Volt & 5.0-Volt Operation, 11 Versions with Various Pin & Gate Counts	Now
ATLV Series	1.4K-18K	1.0-Micron CMOS Gate Array, 1.0-Volt - 3.3-Volt Operation, 8 Underlayers with Various Pin & Gate Counts	4Q-93

Logic

Part Number	Speeds	Description	Availability
AT40281	16-40 MHz	80386SX PC/AT Core Logic Controller, with Posted-Write Cache	Now
AT40283	16-33 MHz	80386SX PC/AT Core Logic Controller	Now
AT40285	16-40 MHz	80386SX/486SLC/486SLC2 PC/AT Core Logic Controller	Now
AT40391B	25-40 MHz	80386DX PC/AT System & Cache Controller	Now
AT40392	25-50 MHz	80386DX PC/AT Memory Controller	Now
AT40493	25-50 MHz	80486 PC/AT System & Cache Controller	Now
AT40495	25-50 MHz	80486 PC/AT System & Cache Controller	Now
AT40498	25-50 MHz	80486 Core Logic Controller	Now
AT40957	33-66 MHz	EISA/ISA PC/AT Integrated System Peripheral	Now
AT40958	33-66 MHz	EISA/ISA PC/AT Bus Controller & Data Buffer	Now
AT40959	33-66 MHz	EISA/ISA PC/AT DRAM & Cache Controller	Now
AT43216	40 MHz	Single-Chip Fast SCSI Controller	4Q-93

Smart Card ICs

Part Number	Memory Size	Description	Availability
AT24C01	1K	2-Wire, Serial E ² PROM	Now
AT24C02	2K	2-Wire, Serial E ² PROM	Now
AT24C04	4K	2-Wire, Serial E ² PROM	Now
AT24C08	8K	2-Wire, Serial E ² PROM	Now
AT24C16	16K	2-Wire, Serial E ² PROM	Now
AT93C46	1K	3-Wire, Serial E ² PROM	Now
AT93C56	2K	3-Wire, Serial E ² PROM	Now
AT93C57	2K	3-Wire, Serial E ² PROM	Now
AT93C66	4K	3-Wire, Serial E ² PROM	Now
AT88SC06	104 x 1	104-Bit Serial E ² PROM with Security	Now
AT88SC101	1024 x 1	1K Serial E ² PROM with Security, 1 Memory Zone, 1024 Bits	Now
AT88SC102	1024 x 1	1K Serial E ² PROM with Security, 2 Memory Zones, 512 Bits Each	Now
AT88SC200	2048 x 1	2K Serial E ² PROM with Gate Array	Now
AT88SC54C	16K x 8	Secure 80C31 Controller with 8K Flash, 8K E ² PROM, Public Key Math Coprocessor	1Q-94
RF ID ASICs	Up to 16K x 1	Analog, Digital & Memory on Single-Chip ASIC	Now

Microcontroller

Part Number	Memory Size	Description	Availability
AT89C51	4K x 8	80C31 Microcontroller with 4K Bytes Flash PEROM	Now
AT89LV51	4K x 8	2.7-Volt, 80C31 Microcontroller with 4K Bytes Flash PEROM	Now

Mixed Signal

Part Number	Frequency	Description	Availability
AT76C10	4 kHz	Programmable Phone Line Equalizer	Now
AT76C10E	4 kHz	Programmable Phone Line Equalizer with On-Board E ² PROM	Now
AT76C176	40-66 MHz	Triple 6-Bit Color Palette DAC	Now
AT76C176A	50-135 MHz	Triple 6-Bit Color Palette DAC with Power-Down	Now
AT76C120	96 kHz	Dual Channel 16/18-Bit A/D Converter	Now



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